DOOSAN NON-CONFORMANCE REPORT

(NCR NUMBER): NCR-DD-2022-PC- 0001
ISSUE DATE: 30-June-2022

PROJECT NAME	Upper Trishuli-1 HEP (216MW)	**PROJECT NO.:**	H20002
PRODUCT NAME	Main Access Tunnel: Junction to Transformer Hall	**DWG/QIWP/SPEC.NO.**	UT1-C-090-CVL-DG-64002
LOCATION	Main Access Tunnel	**RESPONSIBLE ORG.**	M/s: Power China (PC)

(Nonconformance): **(Attachment)** ■ **YES** □ **NO**

RN-0132, dated 05.06.2022, states: *"Detailed construction drawings - in particular series of cross-sections with appropriate, arched tunnel roof geometry shall be produced. This is mandatory as the tunnel engineers must know the exact excavation geometry and respective support (installation) for individual rounds when opening these two branches."*
Furthermore, one can read in RN-0132: *"Provide a set of sections, cross sections similar as indicated above with Class III support, and a section along the "double arch roof-pillar centerline", also with Class III support."*
Subcontractor is so far not following these comments and producing a horizontal roof, instead of a double arch roof (see e.g., the blasting pattern in RFI No. UT#1/NWEDC/DHI/PC/RFI/02/MAT, dated 27.06.2022).
In combination with the sub-horizontal foliation jointing, and with the choice of an inappropriate construction method, this leads to roof instabilities and highly dangerous conditions in the excavation, as already experienced (see NCR 0054 and NCR 0055).
Deadline for rectification: Immediate! (As per OE's NCR-058 Dated 29.06.2022)

Subcontractor/Concern Dept.: M/s Power China **Package Number: PKG # 04**

PREPARED/ISSUED BY: 30-06-2022
■ Design Dept. □ Construction □ Quality Dept.

(REVIEWED BY): T. H. Yum

(APPROVED BY):

RECOMMENDED DISPOSITION: □ USE-AS-IS □ DCN/FCN □ REVEISED DWG □ REJECT
UT1-C-090-CVL-DG-64002-OC, Excavation and initial support Drawings of Access Tunnel to Powerhouse is already approved as noted with DCN-22-C-015 as the above Non-conformance details and its revised version will be resubmitted ASAP.

(Sub-Contractor) (PC)

(PROPOSED BY):
(Subcontractor Design In-Charger)

(CONFIRM BY):
(Subcontractor Design Manager)

(Contractor Construction Department) (DHI)

(REVIEWED BY):
(Design In-charger) 21-07-2022

(APPROVED BY):
(Design Manager)

VERIFICATION OF DISPOSITION IMPLEMENTATION: ■ **(Acceptable)** □ **(Unacceptable)**

(VERIFIED BY): T. H. Yum
(Design In-charger)

(REVIEWED/APPROVED BY):
(Design General Manager)